

Listing of the Claims

1. (Currently amended) A method for detecting modification of a target member of a biochemical pathway, comprising the steps of:
 - a) placing a polymer gel contact mask having holes on a substrate, the holes together with the portions of the substrate which overlie the holes forming cavities, ~~wherein the cavities have a size and an orientation of wells of a 96 well, 384 well, 1536 well, or 3456 well microwell plate;~~
 - b) immobilizing tyrosine kinases in areas of ~~in~~ the cavities of the polymer gel contact mask having the size and orientation of the wells of a 96-well, 384-well, 1536-well, or 3456-well microwell plate, wherein at least one of the tyrosine kinases is a target member of a biochemical pathway;
 - c) exposing the tyrosine kinases to members of the src family of kinases and to ATP in solution, wherein the members of the src family of kinases are additional members of the biochemical pathway that are capable of binding to the target member of the biochemical pathway;
 - d) allowing binding of at least one of the additional members of the biochemical pathway to the target member of the biochemical pathway, wherein the binding results in modification of the target member of the biochemical pathway; and
 - e) detecting modification of the target member of the biochemical pathway.
2. (Canceled)
3. (Canceled)
4. (Canceled)

5. (Canceled)
6. (Previously Presented) The method of claim 1, wherein detecting modification comprises the additional step of quantifying the amount present of the target member of the biochemical pathway based on the modification thereof.
7. (Previously Presented) The method of claim 1, wherein detecting modification comprises the additional step of qualitatively or quantitatively determining the level of activity of the target member of the biochemical pathway based on the modification thereof.
8. (Withdrawn) The method of claim 1, comprising the additional step of qualitatively and/or quantitatively determining the level of activity of at least one biomolecule based on said modification.
9. (Withdrawn) The method of claim 1, comprising the additional step of detecting the presence of at least one immobilized biomolecule based on said modification.
10. (Withdrawn) The method of claim 1, comprising the additional step of identifying the function of at least one immobilized biomolecule based on said modification.
11. (Withdrawn) The method of claim 1, comprising the additional step of quantifying the amount present of at least one immobilized biomolecule based on said modification.

12. (Withdrawn) A method for analyzing biochemical pathways, comprising the steps of:

- a) formation of an array of immobilized biomolecules
- b) exposing the array to biomolecules in solution; and
- c) detecting modification of the biomolecules in solution; wherein the immobilized biomolecules and/or the biomolecules in solution comprise at least two members of at least one biochemical pathway.

13. (Withdrawn) The method of claim 12, further wherein said array comprises at least two different types of immobilized biomolecules.

14. (Withdrawn) The method of claim 12, further wherein said biomolecules in solution comprise at least two different types of biomolecules.

15. (Withdrawn) The method of claim 12, comprising the additional step of detecting the presence of at least one biomolecule in solution based on said modification.

16. (Withdrawn) The method of claim 12, comprising the additional step of identifying the function of at least one biomolecule in solution based on said modification.

17. (Withdrawn) The method of claim 12, comprising the additional step of quantifying the amount present of at least one biomolecule in solution based on said modification.

18. (Withdrawn) The method of claim 12, comprising the additional step of qualitatively and/ or quantitatively determining the level of activity of at least one biomolecule in solution based on said modification.

19. (Withdrawn) The method of claim 12, comprising the additional step of qualitatively and/ or quantitatively determining the level of activity of at least one immobilized biomolecule based on said modification.

20. (Withdrawn) The method of claim 12, comprising the additional step of detecting the presence of at least one immobilized biomolecule based on said modification.

21. (Withdrawn) The method of claim 12, comprising the additional step of identifying the function of at least one immobilized biomolecule based on said modification.

22. (Withdrawn) The method of claim 12, comprising the additional step of quantifying the amount present of at least one immobilized biomolecule based on said modification.

23-26 (Cancelled)

27. (Previously Presented) The method of claim 1, wherein detecting the modification comprises the additional step of identifying the affinity or avidity of the target member of the biochemical pathway to at least one of the additional members of the biochemical pathway based on the binding thereof.

28-32 (Cancelled).

33. (Previously Presented) The method of claim 1, further comprising removing the polymer gel contact mask from the substrate before exposing the tyrosine kinases to the members of the src family of kinases and ATP.

34. (Previously Presented) The method of claim 1, wherein a self-assembled monolayer is formed on the substrate and the tyrosine kinases are immobilized on the substrate by being bound to the self-assembled monolayer.

35. (Currently Amended) A method for detecting modification of MEK proteins or MAPK proteins of a Raf/MEK/MAPK pathway, comprising the steps of:

- a) placing a polymer gel contact mask ~~gasket~~ having holes on a substrate, the holes together with the portions of the substrate which overlie the holes forming cavities, ~~wherein the cavities have a size and an orientation of wells of a 96 well, 384 well, 1536 well, or 3456 well microwell plate;~~
- b) immobilizing inactive MEK proteins and inactive MAPK proteins on areas of the substrate underlying the holes of the polymer gel contact mask that have the size and orientation of wells of a 96 well, 384 well, 1536 well, or 3456 well microwell plate;
- c) exposing the inactive MEK proteins and inactive MAPK proteins to a solution of active Raf proteins, active MEK proteins, ATP, and potential inhibitors of at least one of the active Raf proteins or the active MEK proteins;
- d) allowing binding of the active Raf proteins and the active MEK proteins to the inactive MEK proteins and the inactive MAPK proteins; and
- e) detecting modification of the inactive MEK proteins or the inactive MAPK proteins of the Raf/MEK/MAPK pathway